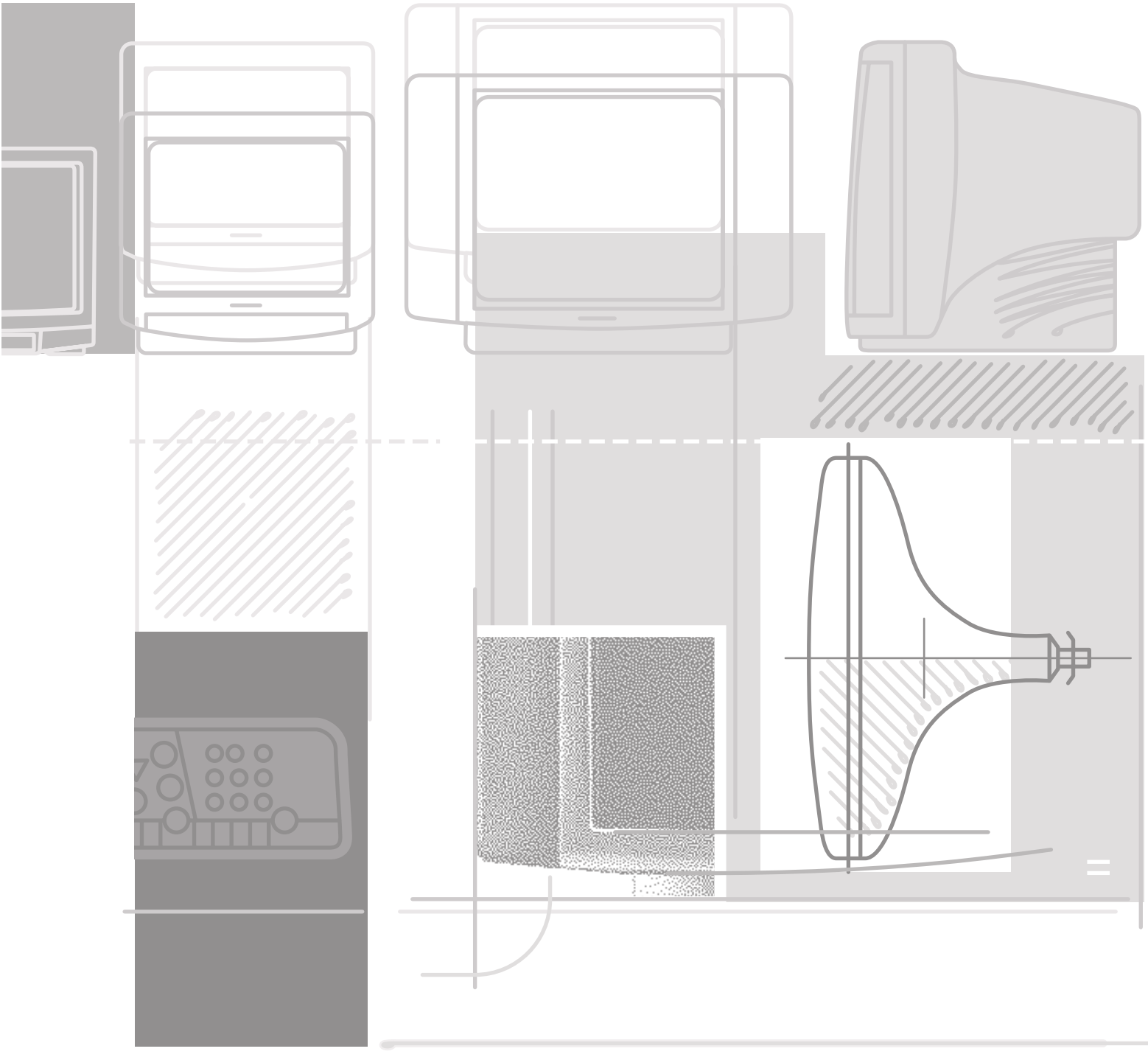
GRUNDIG

COLOR TELEVISION

M 55-105 IDTV



Contents

If a specialized dealer has already set up and adjusted the television, start with page 9 of this manual.

GB

F

I

NL

Notes on Safety and Setting Up

Notes on safety and setting up 3

Connecting and Setting Up

Connecting the television 4
Inserting batteries into the remote control handset 4
Switching the unit on/off 4

Assigning Channel Positions

The automatic tuning system ATS euro plus 5-7
ATS euro plus - Activating the tuning system 8
Assigning channel positions manually 8
Fine tuning 8

The Remote Control Handset

The remote control handset 9

Changing the Sound Setting

Calling up Audio-Menu 10
Width of base 10
Sound (stereo, two-channel sound, mono) 10
Treble, bass, balance 10
HiFi output 10

Adjusting the Picture

Contrast and picture definition 11
Switching the picture format 11
Brightness and colour contrast 11

Teletext

TOP-Text mode 12-15
FLOF-Text mode 13
Teletext without TOP and FLOF-Text 13
Current small picture in Teletext 15

Convenient Functions

Timer/Security functions 16-18
Blocking child-endagering broadcasts 17
Blocking all programmes 17-18
Entering a switch-off time (Sleep timer) 18
Special functions 19
Special functions in TV mode 20
The IDTV menu 20-21

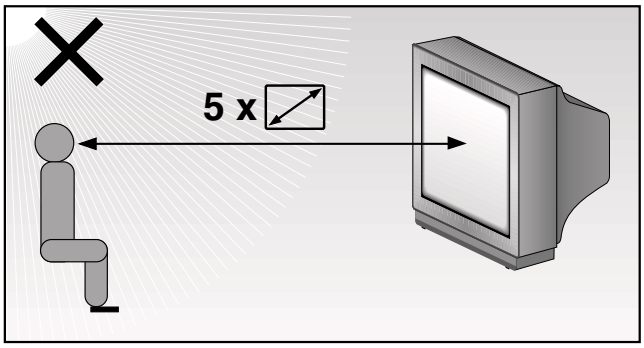
Connection Capabilities and Operation

For video recorder 22-23
For stereo headphone 23
For satellite recorder 23
For camcorder 24
For S-VHS video recorder or S-VHS camcorder 24
Copying recordings via the television 25
For descrambler (decoder) 26

Specification

Specification 27

Notes on Safety and Setting Up



When setting up your television, select a location where as little light as possible falls on the screen.

The ideal viewing distance is five times the diagonal width of the screen.

If the television is to be built into a compartment or similarly enclosed, minimum distances must be maintained.

Do not cover the ventilation openings on the back.

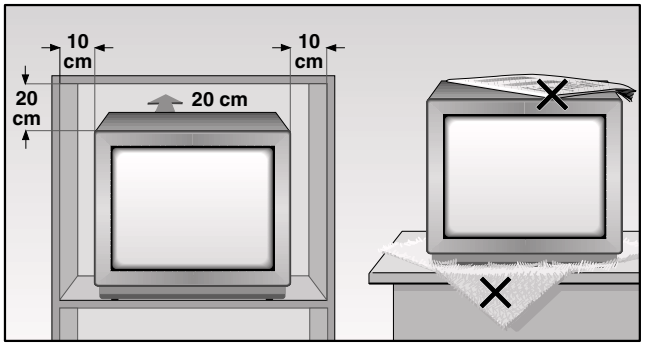
The heat exchange inside the unit generates an air circulation. which attracts dust particles (carpet and curtain fibres and home dust). These particles accumulate inside the ventilation slots obstructing these over the years and causing a build-up of heat.

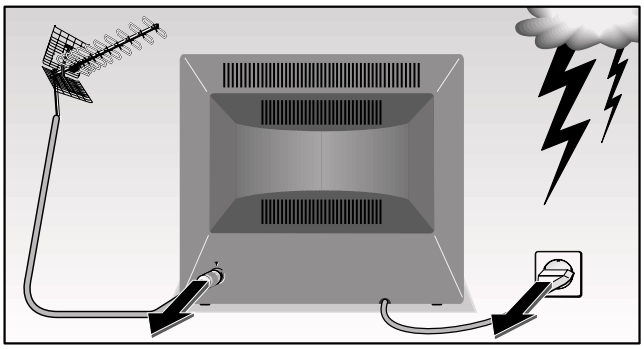
Heat build-up can reduce the service life of your television, and can also be dangerous.

For this reason, let remove the dust deposits by a specialist.

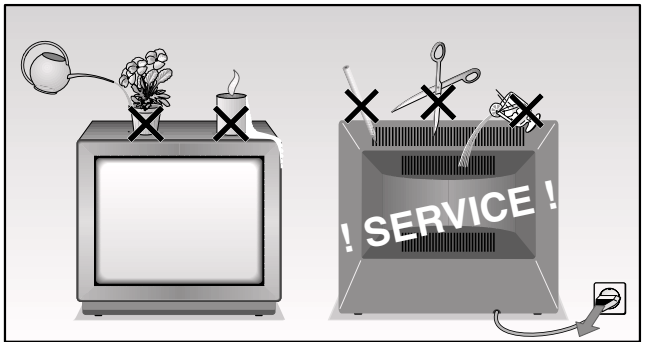
When setting up and using this unit, please make sure that the mains connection wire is free and not jammed in order to avoid damage

Never set up speakers next to the unit.





Never place the television near heat sources.
Even if your television is switched off, it can still be damaged by lightning striking the mains and/or aerial cables.
For this reason, you should always disconnect your television from the mains and the aerial system during thunderstorms.



Never expose the unit to moisture.
Do not insert foreign objects into the ventilation openings on the back.
Caution! High voltage!

GB
F
I
NL

Connecting and Setting Up

Connecting the Unit

Connecting the unit to the aerial

Plug the aerial cable into the aerial socket Y on the unit.

This highly digitized TV set provides optimum picture and sound quality.
For this, the following conditions must be met:
Correctly functioning aerial system and connecting leads with high screening factor (85 dB) between the TV set and the aerial socket, and between the TV set and the video recorder, respectively.
Avoid cable loops near the TV set.

Connecting the unit to the mains

Plug the mains cable into the wall socket.

Additional Information for Units sold in Great Britain

Units sold in GB are suitable for operation from a 240 V AC, 50 Hz mains supply.

In case this appliance is supplied with a Safety Standard Approved mains lead fitted with a non-rewireable 13 Amp mains plug which, if unsuitable for your socket, should be cut off and an appropriate plug fitted by a qualified electrician. The fuse and fuse holder must be removed from the plug as accidental insertion of the redundant plug into a 13 Amp socket is likely to cause an electrical hazard.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13 Amp socket elsewhere.

If it is necessary to change the fuse in the non-rewireable plug, the correct type and rating (5 Amp ASTA or BSI approved BS 1362) must be used and the fuse cover must be refitted. If the fuse cover is lost or damaged the lead and plug must not be used until a replacement is obtained. Replacement fuse covers should be obtained from your dealer.

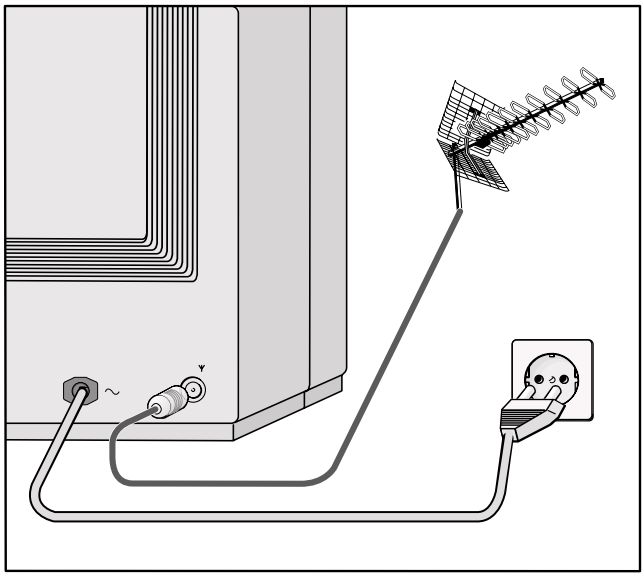
If a non-rewireable plug or a rewireable 13 Amp (BS 1363) plug is used, it must be fitted with a 5 Amp ASTA or BSI approved BS 1362 fuse. If any othe type of plug is used it must be protected by a 5 Amp fuse either in the plug or at the distribution board.

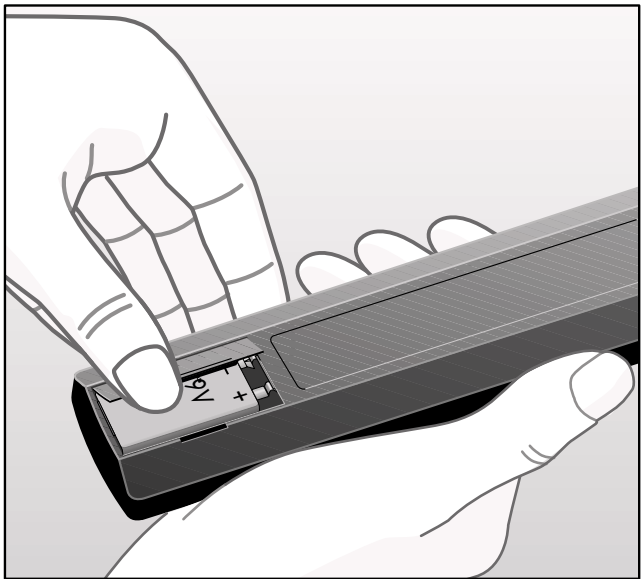
Important:
The wires in the mains lead are coloured in accordance with the following code:

BLUE – NEUTRAL
BROWN – LIVE

As the colours of the wires in the mains lead of your appliance may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows:
Connect the BLUE coloured wire to plug terminal marked with the letter "N" or coloured black.
Connect the BROWN coloured wire to the plug terminal marked with a letter "L" or coloured red.
In no circumstance must any of the wires be connected to the terminal marked with a letter "E", earth symbol ⏚ , coloured green or green and yellow.

Replacement mains lead can be obtained from your dealer.





Inserting Batteries into the Remote Control Handset

Remove the battery compartment cover by pressing on the catch and then removing the cover.

Insert the battery supplied. Make sure it is inserted correctly (note the markings in the battery compartment).

Switching the Unit On and Off

Press the ⏻ button on the television.

If you do not use the televison for extended periods of time (e.g., at night), press this button to turn the televison off.
This helps you to save energy.

Assigning Channel Positions

The Automatic Tuning System "ATS euro plus"

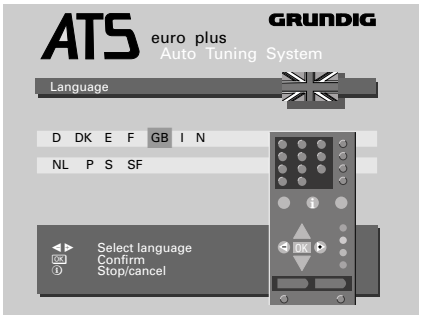
After switching on the television set, the first page of "ATS euro plus" appears.

If the first page does not appear, see page 8 ("ATS euro plus") insert "ATS euro plus" appears.

The dialogue line as a guide.
The bottom line indicates which buttons of the remote control should be used to make changes.

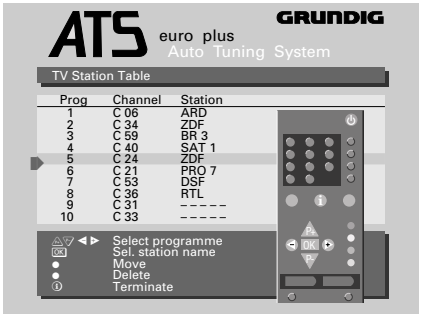
Your television is equipped with "ATS euro plus" (Auto Tuning System). This new system offers you the advantage of automatic channel position assignment.
This search and memory system scans the entire reception range, stores the channels found, and enters them with their respective station name (abbreviation) into a TV station table.

You can sort the automatically assigned channels as you wish and assign them a name from a list of station names (abbreviations) which is displayed.

Press the following buttons on the remote control	You will see this on the TV screen	Explanations
1. Menu guide language a) Select a language ◀ or ▶ b) Confirm OK		You can choose between several languages for the on-screen dialogue with your television. After you select a language, all menu guide messages and information will appear in the language you selected. German is preset at the factory.
2. Country (location) a) Select a country ◀ or ▶ b) Start ATS OK		The "ATS euro plus channel search" is started. The television searches for all available channels, sorts, and stores them. This procedure can take several minutes, depending on the number of channels that can be received. When the search procedure is completed, the "TV Station Table" is displayed.

▶▶

Assigning Channel Positions

Press the following buttons on the remote control	You will see this on your TV screen	Explanations
3. Changing the order of the channels a) Select the channel position. P– or P+ b) Highlight the channel position (yellow button) c) Select new channel position P– or P+ OK		Check the order of the TV channels in the "TV Station Table". If you are not satisfied with the order, you can change it. Repeat this procedure for the remaining TV channels if necessary.
4. Clearing the data of a channel position a) Select the channel position. P– or P+ b) Clear the data. (red button)		

Assigning Channel Positions

Press the following buttons on the remote control	You will see this on your TV screen	Explanations

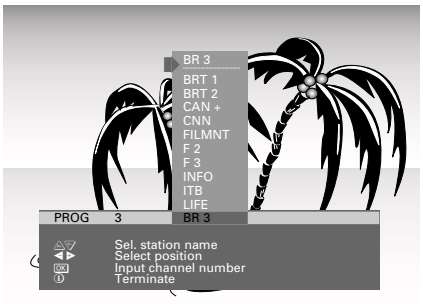
5. Changing a channel name or re-naming it.

a) Select the channel position.

P– or P+

b) Call up the list of channel names (abbreviations).

OK



If you cannot find the desired name in the list, you can enter your own. In order to do so, press the ▶ button once, and using the P– or P+ button, select the desired letter/number.

c) Select the new channel name.

P– or P+

Press the ▶ button to select the next position.

d) Terminate

ⓘ

Press the ⓘ button to complete this procedure.

6. Terminating the adjustment

a) Terminate the adjustment.

ⓘ

Assigning Channel Positions

ATS euro plus – Activating the Tuning System

If you have already found and stored in memory channels with "ATS euro plus" and wish to start a new ATS euro plus search (for example, when you have changed your location or are connected to a cable TV system at a later date), press the P/C button for approx. 4 seconds. The following display will appear on the picture screen:

You can select between "Update" and "Restart".

Select "Update" if new channels are offered, and "Restart" in the case of relocation or connection to a cable TV system.

For making further adjustments, refer to the indications given in the dialogue line.

If you have selected "Update", the indications concerning the language and country are omitted.

The newly found channels are added to the station table and marked in red (cursor bar).

You can "displace" the channels to move them to the desired channel (programme) position.

If "Restart" has been selected, channel allocation will newly be done. The existing channel allocation data is cleared (see also pages 5 to 7).

Call up the memory function by pressing the i button and store the new channel allocation by pressing the OK button.

Assigning Channel Positions Manually

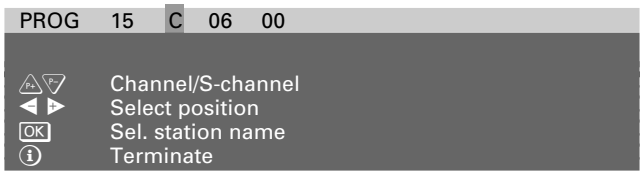
Example:

You wish to assign a programme which is transmitted on special channel S 08 to the channel position 15.

How to proceed:

Select channel position 15.

Press the P/C button.



Proceed as indicated in the dialogue lines.

In the channel position data line, the letter C (for channel) is highlighted in yellow.

Press the P+ button.
C changes to S (for special channel).

Press the ▶ button.
The yellow highlight jumps to the channel entry position.

Press the buttons 0 and 8.
S 08 appears in the channel position data line.

It is also possible to use the manual channel search function for entering the channel numbers.

For this, press the P+ or P− button to start the channel search.

The channel search stops at each channel that can be received.

The television automatically adjusts the best possible picture quality.

Allocation of channel position 15 to S 08 is thus completed. Press the i button to terminate channel position assignment (return to TV picture).

In difficult reception conditions it may be necessary to adjust the picture by manual fine tuning.

Fine Tuning

Press the P/C button.

Press the ▶ button until the yellow highlight has reached the 00 position (for fine tuning).

Use the or P+ (63 steps) or

P− button (64 steps)

to adjust the optimum picture and sound quality.

The Remote Control Handset

On this page you will find a brief description of the remote control buttons. Refer to the corresponding chapters of this manual for information on operation.

⏻ Switch to stand-by

①…⓪ Channel selection and ⓪AV switching on the television from stand by or
– Selection of AV position
– Entry of page numbers in teletext mode

P/C Calling up programme data. Keep the button depressed for 4 sec.: access to ATS.

AUX Preselect button for various functions:

ⓘ Call up the Info-Center.

P+ Individually switch channels. (1, 2, 3 ...)

P- Individually switch channels (... 3, 2, 1)

If one of the buttons P+ or P- is kept pressed, the station name will be displayed in scrolling mode. When releasing the pressed button, the unit switches to the selected programme position.

or

P+ Move cursor up,

P- down

OK Change and activate various functions

◀ ▶ Volume,

or

◀ ▶ Move cursor left, right

⊖◑⊕ Colour contrast

❍ VIDEO Video recorder remote control (keep ❍ VIDEO button depressed)

❍ PIP Picture-in picture on/off

❍ 16:9 Change picture format 4:3 ↔ 16:9

❍ IDTV Access to IDTV menu

❍ Sound on/off (mute) Access to Audio-Menu

Teletext mode ↔ TV mode

❍ Programme scan

❍ Freeze-frame

❍ Time on/off

❍ Current programme

⊖☼⊕ Brightness

❍ SAT Satellite receiver remote control (keep ❍ SAT button depressed)

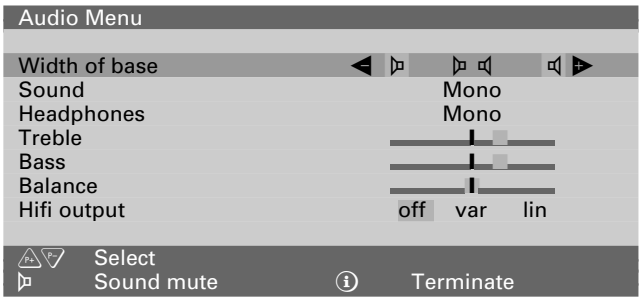
When the battery is dead, the following display appears on the screen: "Battery Telepilot".
Dead batteries must be removed immediately.
We assume no responsibility for damage resulting from battery leakage.
Dead batteries should be disposed of properly (environmental protection).

Changing the Sound Setting ...

... with the Audio Menu

Calling up the Audio Menu

Press the ◯⊳ button. The audio menu appears.



The "Width of base" line is selected.

After each adjustment you can switch off the "Audio Menu" by pressing the ⓘ button.

Width of base

This improves the acoustic pattern during stereo transmissions and improves the sound of mono transmissions.

Adjust the base width with the ◀ or ▶ button.

Sound (stereo, two-channel sound, mono)

If your television receives two-channel sound transmissions, for example, when a film is broadcast in the original sound track and transmitted on sound channel 2, and the synchronized version is broadcast on sound channel 1, you can select the version you want to hear by

selecting the "Sound" line by pressing the P− or P+ button and

selecting the sound channel by pressing the ◀ or ▶ button (channel selection also possible when using headphones).

Your television automatically switches to stereo if the programme is transmitted in stereo.

If stereo reception is of insufficient quality, you can switch to mono by pressing the ◀ or ▶ button.

You can also change the sound setting without calling up the "Audio-Menu; to do so press the AUX button and then the ◯⊳ button.

If you wish to always receive this channel in mono, enter ",MO" at the fourth position of the station identification (e.g., BBC,MO).
See chapter "Entering a Station Name".

Treble, bass, balance

The sound can be adjusted according to your individual taste. Select the "Bass", "Balance" or "Treble" line by pressing the P− or P+ button.
Adjust with the ◀ or ▶ button.

HiFi output

At the rear of the unit, there are the phono sockets L and R. You can connect a HiFi system to these sockets and reproduce the TV sound via this system. You have the choice to select between "off","lin", and "var ".

For this, highlight the line "Hifi output" by pressing the P− or P+ button and make your selection with the ◀ or ▶ button.

lin (linear) = Constant level for Hifi systems.
Settings are only possible there.
The speakers in the television are switched off.

var (variable) = Setting of the volume level of the Hifi system possible with the remote control handset of the TV receiver.
Select "var" with the ▶ button, switch off the Audio Menu with the ⓘ button, press the AUX button, and adjust the volume with the ◀ or ▶ button.
The speakers in the television receiver are switched off.

off = Normal mode.
The speaker boxes of the Hifi system and the loudspeakers in the TV set are in operation.

Switching off the Audio-Menu

Press the ⓘ button.

Adjusting the Picture

Contrast and Picture Sharpness

Press the ⓘ and then the OK button.

The "GRUNDIG Info-Center" appears in the display.

The "Picture Menu" line is highlighted in blue.

Press the OK button.

The "Picture Menu" appears in the display.

Select "Contrast" or "Sharpness" or "Tint" by pressing the P− or P+ button. (Only with transmissions in NTSC standard, "Tint" will appear in addition in the "Picture Menu".)

Adjust the setting by pressing the ◀ or ▶ button.

Press the ⓘ button after exiting the picture menu to automatically store the settings.

This television was tested with maximum contrast to test the reliability of all components.
It is advisable to turn down the contrast to offer you the best picture quality depending on lighting conditions or where your TV is set up.

Switching the Picture Format from 4:3 to 16:9

If your television operates in conjunction with a satellite receiver at the D2 MAC television norm with a picture format of 16:9, you will need to change the conventional 4:3 format to 16:9.

Press the ◯ 16:9 button.
The selected format (for example, 4:3) appears.

Press ◯ 16:9 once more.
The picture format has been changed and the selected format is displayed.

Press the ◯ 16:9 button again.
The chosen format (e.g. 4:3/16:9 auto) is shown.
The television switches automatically to the correct format.

Press the ◯ 16:9 button again.
The television switches back to the 4:3 format.

Brightness and Colour Contrast

To do so, press – or + on the corresponding rocker button (☼, ◑) until you have reached the desired setting.

Adjust brightness with −☼+.

Adjust colour contrast with −◑+.

The corresponding scale appears on the screen.

The new settings are indicated.

Teletext

Teletext is provided free of charge by television stations and is transmitted together with the television signal in the form of texts, graphic representations and subtitles which are visible on your screen.
Information pages and dialogue lines offered by your television make it simple to use teletext. The information in the dialogue lines indicates the various functions available as well as the buttons used for these functions.
Your television automatically switches to the different teletext systems (TOP, FLOF) offered by the television stations.

If the aerial signal is only marginal, teletext pages may exhibit disturbances. If finetuning the television brings no improvement, have your aerial system checked.

TOP-Text Mode

What is TOP-Text?

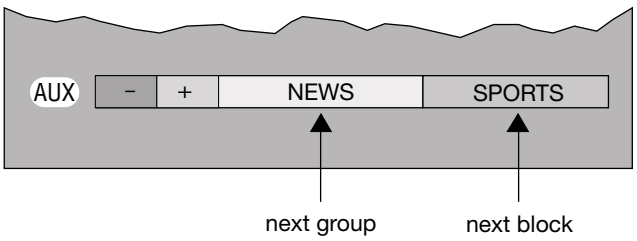
TOP-Text is an innovation which simplifies and accelerates the selection of teletext pages. TOP-Text stands for "Table Of Pages".

TOP allows you to select teletext pages without knowing their page numbers. TOP does this by arranging all the pages that are transmitted by the television stations according to topics, also called blocks, as in a filing cabinet.

For example, all news items are listed under "News". Further topics include the blocks "Sports", "TV Programmes" and "Services". These blocks in turn are divided into several groups; "News", for example, is divided into politics, economics, culture, etc.

The individual teletext pages are found within these groups.

The following illustration shows the dialogue line for a TOP teletext page.



TOP-Text takes you to the teletext page you want, quickly and simply.

Using TOP-Text to call up teletext pages

Preparation

Select the TV channel with the TOP-Text pages you wish to view.

Selecting teletext

Press the ▤ button.

The Contents Page 100 or the page you called up last appears on the screen.

A red, green, yellow, and blue text field are visible at the bottom of the picture.

You will find correspondingly coloured buttons on your remote control handset.

Pressing the red button returns you to the previous page.

Pressing the green button scrolls to the next available page.

Pressing the yellow button switches to the next group.

After reaching the last group of the block you selected, you automatically advance to the next block (overflow).

Pressing the blue button switches from block to block.

You can also call up the desired Telext page directly by entering the desired page number as three digits with the numeric buttons ①…⓪. The page appears.

Press the P/C button to return to the last viewed page.

Teletext

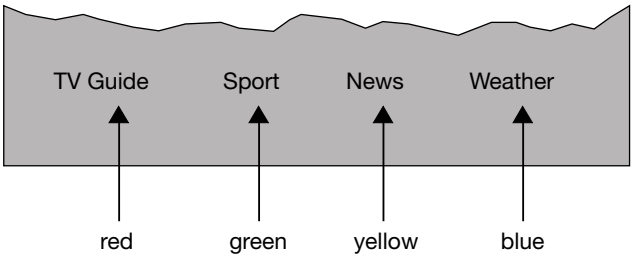
FLOF-Text Mode

What is FLOF-Text?

With FLOF-Text, you are guided by different colours that appear in the info-lines at the bottom of the screen.

These colours correspond to topics or pages that you can select using the coloured buttons.

The following illustration shows the dialogue line for a FLOF-Teletext page.

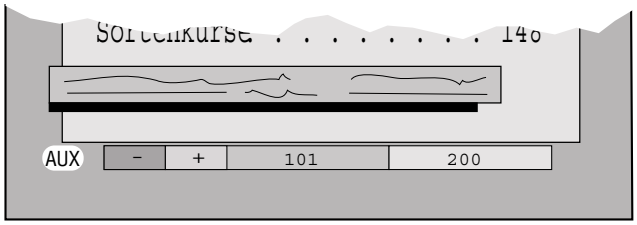


This way FLOF-Text takes you more quickly to the teletext page you want.

Teletext Without TOP and FLOF

The features

Here you select the teletext pages by entering the page number or by using the coloured fields and coloured buttons which correspond to page numbers. The illustration shows the dialogue line for a teletext page without TOP/FLOF-Text.



Calling up teletext pages by entering the page number

Preparation

Select the TV channel with the teletext pages you wish to view.

Selecting teletext

Press the ▤ button.

The Contents Page 100 or the teletext page you last viewed appears.

At the bottom of the screen you will see four coloured fields.

You can call up the available pages by pressing the corresponding button (red, green, yellow or blue).

You can also call up the desired teletext page directly by entering the three-digit page number with the numbered buttons ①…⓪. The page appears.

Press the P/C button to return to the last viewed page.

Switching off teletext

Press the ▤ button.

Text-Setup

In the Text-Setup menu you can determine which page will appear when calling up the Teletext function (opening page) and on which page the TV programme offer is to be found. In addition, you can select between three language groups.

Press the AUX button.

Use the ◀ or ▶ button to select the ⇄ symbol

Press the OK button.

The Text-Setup menu appears.

Use the P- or P+ button to select the line "Opening page" or "Programme page" or "Language group".

Press the OK button to make changes.

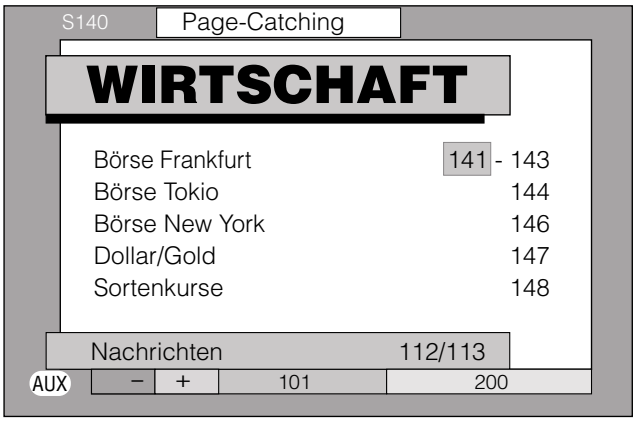
Follow the hints in the dialogue line.

Press the ⓘ button to switch off the menu.

Page-Catching

This function allows you to select a teletext page without entering the corresponding page number.

You can select desired teletext pages from the overview pages (pages designated with a three-digit page number).



Press the P- or P+ button.
"Page-Catching" appears in the upper part of the screen.
The first or last page number of the overview is highlighted by a frame.

Press the P- or P+ button to move the frame to the desired page number.

Press the OK button.
The desired page appears on the screen.

"MEGATEXT" Menu Page

Press the ≡ and then the i button.

The "MEGATEXT" page appears.

This page provides you with an overview of the block and group pages currently offered by the teletext service. For teletext without TOP, only the numbers of the transmitted pages are displayed.

Select the desired line with the P-, P+, ◀ or ▶ button (block, group or page) and call it up by pressing the OK button.

The selected page appears.

Press the i button to make the "MEGATEXT" page disappear.

Current Programme

(Only for stations which provide teletext service).

While in TV viewing mode, press the red button. The title of the current programme and the current time will be displayed.

Press the i button to remove this information from the screen.

If additional information is offered for the current programme, call up the respective teletext page by pressing the OK button.

If subtitles are offered to the current programme, these can be visualized by pressing the yellow button.

Pressing the ≡ button brings you back to the programme overview.

Press the ≡ button to quit teletext.

Watching Television during Teletext Operation

Updating pages

Certain teletext pages are constantly updated, such as stock market reports and sporting events, as well as the latest news.

If you want to watch television and nevertheless remain informed, first select a page of your choice, and then

press the AUX button.

Select the ≡X symbol by pressing the ◀ or ▶ button.

Press the OK button.

The programme is still visible for viewing, and at the top of the screen, the teletext symbol ≡X appears.

When the message "Update" appears in the information line,

press the AUX button.
The updated teletext page appears.

You can also use this function to bypass waiting times while the TOP teletext decoder is searching for a page, or while sub-pages are being read in. As soon as the page is found, the message "Ready for call-up" appears in the info-line.

Doubling Character Size

Press the AUX button.

Select the symbol by pressing the ◀ or ▶ button.

Repeatedly pressing the OK doubles the character size in the following order:
upper half of the picture,
lower half of the picture,
return to normal picture.

Subpages

Several subpages can be combined under a single page number which are then automatically scrolled at an interval determined by the television station. This is indicated by the symbol ≫ at the bottom right, or, for example, with 2/4 below the time, which indicates that you are looking at the second of four subpages.

Reading in multiple pages

A multiple page is selected.

Press the AUX button.

Select the symbol with the ◀ or ▶ button.

Press the OK button.

At the lower picture edge, between the ◀ and ▶ button symbols, first the page number of the subpage currently visible on the picture screen is highlighted on yellow background. Then the remaining subpages are read in.

With the ▶ button, you can switch forward to the following subpage, and with the ◀ button back to preceding subpage. Press the OK button to cancel this function.

Calling up subpages directly (alarm page)

A multiple page has been selected.

Press the AUX button.

Select the symbol by pressing the ◀ or ▶ button.

Press the OK button.

Select the symbol by pressing the ◀ or ▶ button.

Using the numbered buttons, enter the desired four-digit subpage number. For example, enter the sequence 0002 for the second page. The desired subpage is sought and displayed.

The selected page number, for example 155/0002, appears in the info-line.

Press the OK button to deactivate this function.

Answer

This function can be used on certain teletext pages to solve riddles during a televised programme, for instance, or for programming a video recorder via VPS pages.

Press the AUX button.

Select the symbol by pressing the ◀ or ▶ button.

Press the OK button;
the hidden information becomes visible.

Press the OK button;
the "answer" function is deactivated.

Stop

Page read-in and update are stopped.

Press the AUX button.

Select the symbol by pressing the ◀ or ▶ button.

Press the OK button;
Stop appears in the top of the screen. The contents of the displayed page are now "fixed", meaning that it is no longer updated, and you remain on this page.

Press the OK button;
the "stop" function is cancelled.

Current Small Picture in Teletext

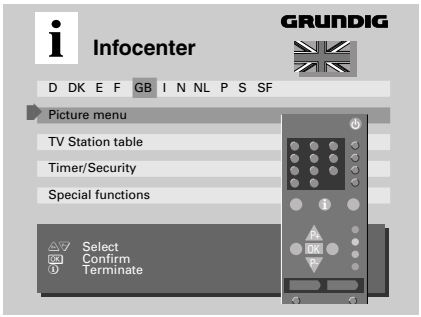
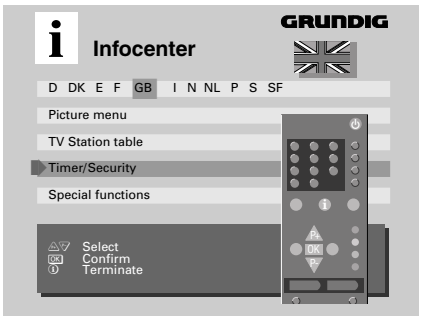
While using Teletext, a small picture can be displayed in the top right corner of the picture screen showing the current contents of the selected programme position.

For this, press the ◯ PIP button.

Timer/Security Functions

This is for entering and storing
a switch-off time (Sleep Timer),
or a code number (Security-Code) which allows you to either
block child-endangering broadcasts, or
block all television programmes.

If you call up the timer functions and you were not tuned to a programme that offers teletext, entries can only be made in minutes.

Press the following buttons on the remote control	You will see this on the TV screen	Explanations
1. Call up the "GRUNDIG Info Center". i OK		By pressing the i button you can return to the current programme at any time.
2. Call up the "Timer/Security" line. P– P– a) confirm OK		Choose one of the following functions: 3.1 Block programmes unfit for children. (The signal for this is not yet transmitted by all programme offerers). 3.2 All programmes blocked. 3.3 Sleep Timer (switch-off time).

Convenient Functions

Press the following buttons on the remote control	You will see this on your TV screen	Explanations

3.1 Blocking programmes unfit for children*

a) Enter code as four places.

OK

1 … 0

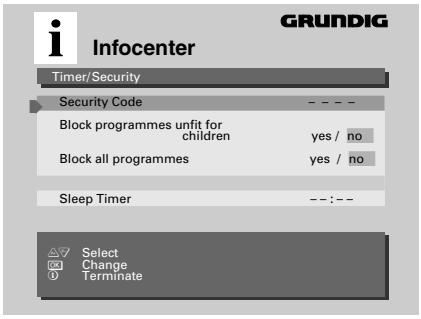
OK

b) Block programme: yes

◀

c) Switch to TV mode.

i



You can block the broadcasts at any time.

If now a programme unfit for children is being broadcast, a table with respective hints appears on the screen.

Memorize the stored security code!
If you should forget the code, refer to the key on the last page (cover).

3.2 Block all programmes *

a) Enter code as four places.

OK

1 … 0

OK

b) Select line "Block all programmes".

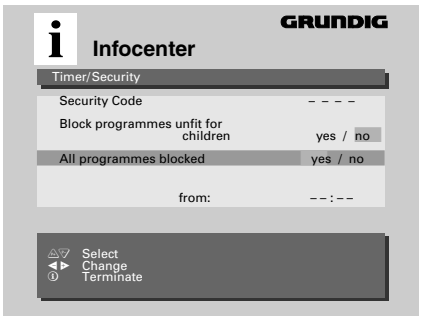
P–

◀ or ▶

c) Enter switch-off time (if desired)

P–

OK



After the television has been turned off (automatically or with the standby button ⏻), it cannot be used by unauthorized persons.

Memorize the stored code number!
If you should forget the code, refer to the key on the last page (cover).

The television switches off at a predetermined time and can only be turned on again when you enter your personal identification code .

* The steps explained on page 16 must already be executed.

Press the following buttons on the remote control	You will see this on your TV screen	Explanations
1 … 0 OK d) Switch to TV viewing mode. i		The television automatically switches off at the predetermined time and can only be used again when you enter your personal identification code.

3.3 Entering a switch-off time (Sleep Timer) *

a) Select "Sleep Timer". P– OK b) Enter switch-off time. 1 … 0 OK c) Switch to TV mode. i		The television automatically switches off (standby) at the predetermined time.

* The steps explained on page 16 must already be executed.

Special Functions

The "Special Functions" menu is divided into four menu items. In the "Settings" menu, you can carry out different basic settings. The "AV Connections" menu will be explained on page 22. The IR-Dataprogrammer and service functions are only for your dealer. The service function is protected by an identification number.

Calling up the Special Functions menu

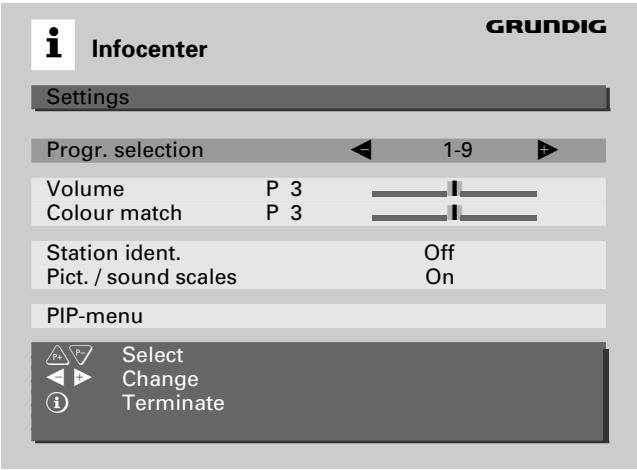
Press the ⓘ and then the OK button.
The "GRUNDIG Info-Center" appears in the display.

Continue to press the cursor button P- or P+ until "Special Functions" is highlighted in blue.

Press the OK button.
The "Special Functions" menu appears.

Calling up the "Settings" menu

Press the OK button.
The line "Progr. selection" is highlighted in blue.



Press the ⓘ. button to switch back to the TV programme.

One- or two-digit channel selection

If you have assigned less than 10 channel positions you should limit the programme selection to between 1-9.
Press the ◀ or ▶ button to change the settings.

Restricting selection of channel positions concerns only the buttons ① - ⑨. With the P+ button it is still possible to select all programme positions.

Changing the volume of a channel position

If you receive a programme whose volume deviates from other channels (too loud or too low), you can adjust the volume.

Press the P- button to highlight "Volume" in blue.

Use the ◀ or ▶ button to change the volume. Only the volume of the programme currently being viewed is changed.

Press the ⓘ button to return to the channel you are currently watching.

Colour match

Select "Colour match" with the P- button.
The line appears highlighted in blue.

Use ◀ or ▶ button to change colour match. Only the colour match of the programme currently being viewed is changed.

Displaying station identification

Call up the "Settings" menu.

Highlight the line "Channel ident." in blue using the P- button.

Use the ◀ or ▶ button to select whether the station identification (e.g. BBC) should appear continuously, briefly, or not at all.

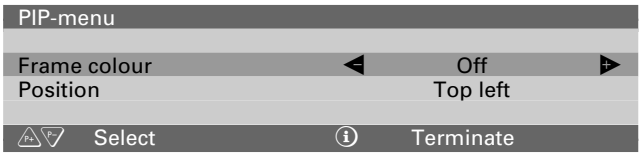
Picture/sound scales

Press the P- button to highlight the line "Picture/sound scales" in blue.

Press the ◀ or ▶ button to select wether you wish to see the scales, such as

PIP Menu

Press the P- button to highlight the line "PIP-Menu in blue.
Press the OK button.



Frame colour

The line "Frame colour" is highlighted in blue.

Use ◀ or ▶ button to select whether the PIP shall have a black, grey or white frame, or no frame at all.

Frame position

Press the P- button to highlight the line "Position" in blue.

Use ◀ or ▶ button to select the position at which you wish the PIP to be located. You can select between:
Top left, top right, bottom left, bottom right.

Convenient Functions

Special Functions in TV Mode

Freeze-frame

This "freezes" a picture during a current programme.

Press the **yellow** button.

Press the yellow button once more, or the ⓘ button to abort this function.

The freeze-frame function can also be selected in the IDTV menu.

Picture-in-picture

This "freezes" a small picture during a current programme.

Press the ❍ PIP button.

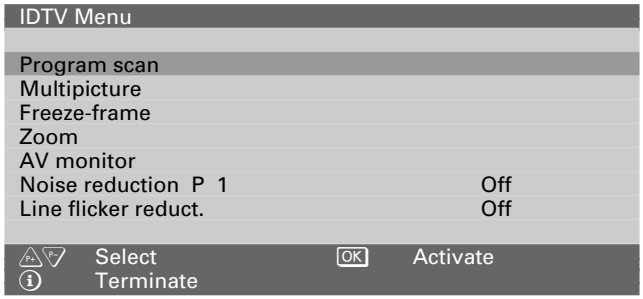
Press the ⓘ or the ❍ PIP button to end this function.

The IDTV Menu

Program scan

This menu allows you to call up nine different programmes as small pictures (freeze-frame without sound) and the associated progamme names (abbreviations) on the picture screen.

Press the ❍ IDTV menu to call up the IDTV menu.



Select the line "Programme scan".

Press the OK button.

The small pictures are updated one after the other in brief intervals.

You can switch backwards or forwards by nine channels at a time using the P− or P+ button.

If you wish to select a certain programme out of the 9 offered channel positions, enter the number of this channel position with the numeric buttons.

P1/P10/P19/P.. Numeric button **1**	P2/P11/P20/P.. Numeric button **2**	P3/P12/P21/P.. Numeric button **3**
P4/P13/P22/P.. Numeric button **4**	P5/P14/P23/P.. Numeric button **5**	P6/P15/P24/P.. Numeric button **6**
P7/P16/P25/P.. Numeric button **7**	P8/P17/P26/P.. Numeric button **8**	P9/P18/P27/P.. Numeric button **9**

Press the ⓘ button or the ❍ IDTV button to end this function

The programme scan function can also be called up directly (outside the menu) by pressing the blue button.

Multipicture – Visualizing 9 small pictures

With this function, you can call up a series of 9 small pictures of the same programme - eight of them time-shifted - and display them on the screen.

Press the ❍ IDTV menu to call up the IDTV menu.

To call up this function, press the P− or P+ button to highlight the line "Multipicture" then press the OK button.

Press the ⓘ button or the ❍ IDTV button to end this function.

Convenient Functions

Zoom

With this function, you can select a section of the picture and enlarge then move it, including freeze-frames.

Press the ○ IDTV button to call up the IDTV menu.

Select the line "Zoom" with the P− or P+ button.

Press the OK button.

The enlarged section of the picture can be moved by using the P−, P+, ◀ or ▶ buttons.

Pressing the ⓘ button, the ○ IDTV button, or changing to another channel position terminates this function.

AV-Monitor – The television set as a monitoring system

Example:

You want to monitor a child´s bedroom with a video camera yet continue to watch television.

Proceed as follows:

Connect camcorder to the black, orange or VIDEO IN socket.

Select the corresponding AV-position with the ⓪ AV button.

Select the desired programme.

Press the ○ IDTV to call up the IDTV menu.

In the menu, select AV-Monitor and confirm with the OK button.

The picture from the child´s room appears as a freeze-frame (small picture), and is thereafter continuously updated.

When the ⓪ AV button is pressed, the TV programme appears as small picture.

In place of the video camera, a video recorder can also be connected, and its tape contents can be displayed on the screen.

Pressing the ⓘ button or separating the connected units ends this function.

Noise reduction

Noise reduction can improve the picture quality if the television/video signal source is poor.
In addition, colour disturbances (cross-color) which occur on the fine vertical black/white lines, are also reduced.

Press ○ IDTV to call up the IDTV menu.

Select the menu line "Noise reduction" with the P− or P+ button.

Using the ◀ or ▶ buttons, select :

Off = if the signal is good;

Auto = for slightly disturbed colour pictures, or

High! = This should only be used for pictures which are strongly distorted as otherwise "tracers" result when there are fast movements on the screen.

Press ⓘ to remove the menu from the screen.

Line flicker reduction

Television sets operate according to the interlaced scanning process, which means that two frames are combined. This normally results in horizontal edges which flicker in 25 Hz cycles. This 100 Hz television set reduces this effect.

Press the ○ IDTV button to call up the IDTV menu.

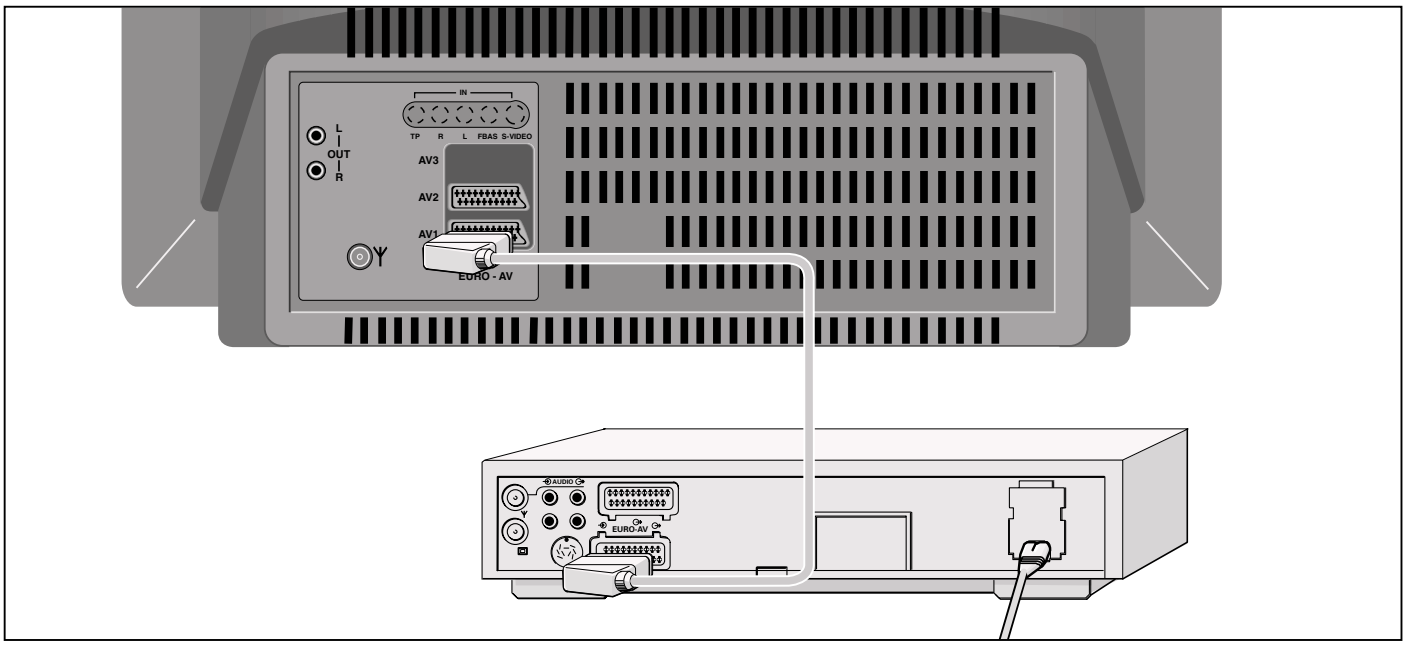
Select the menu line "Line flicker reduct." with the P+ or P− button.

You can switch this function on and off with the ◀ or ▶ button.

Press the ⓘ button to end the function.

Connection Capabilities and Operation ...

... for Video Recorder



Connection

Connect the video recorder with an AV cable to the black or orange AV socket,
or with an aerial cable (75 Ohm) to the aerial socket.

Video recorder connected to the black Euro-AV socket

Press the ⓪AV button until A 1 appears.
Start video recorder playback.

The picture/sound signal of the video recorder, which is connected to the black EURO-AV socket can be switched to any channel position (refer to "Connecting a Descrambler", page 26).

Video recorder connected to orange AV socket

Press the ⓪AV button until A 2 appears.
Start video recorder playback.

You can also connect an S-VHS video recorder. For this, select the menu "AV-Connections" and select "on" in the second line AV 2 under the column SVIDEO.

Proceed as follows

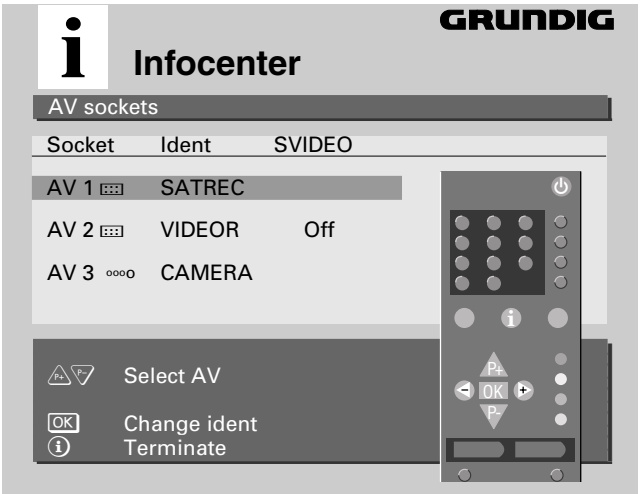
Press the ⓘ and then the OK button.
The "GRUNDIG Info-Center" appears in the display.

Repeatedly press the cursor button P- or P+ until the line "Special functions" is highlighted in blue.

Press the OK button.
The Special functions menu appears.

Press the P- button.

Press the OK button. The "AV-Connections" menu appears.



Press the button P-. AV2 is highlighted in blue.

Press the ◀ or ▶ button; "On" appears in the menu.

Press the ⓘ button to return to the TV picture.

Connection Capabilities and Operation …

Video recorder connected to the aerial socket

Assign the playback channel specified by your video recorder (between 30 and 40) to an available channel position (e.g. P16) (refer to chapter "Assigning Channel Positions Manually"). If you enter "AV-,AF" as the station identification for this channel position, any deviations from the playback channel of the recorder will be compensated for by the television.
If you do not know the playback channel of your video recorder, start playback on the video recorder and use the manual search function on your television to search for the channel (refer to chapter "Assigning Channel Positions).

Note the channel position for subsequent video playback.

Soud reproduction is in mono only.

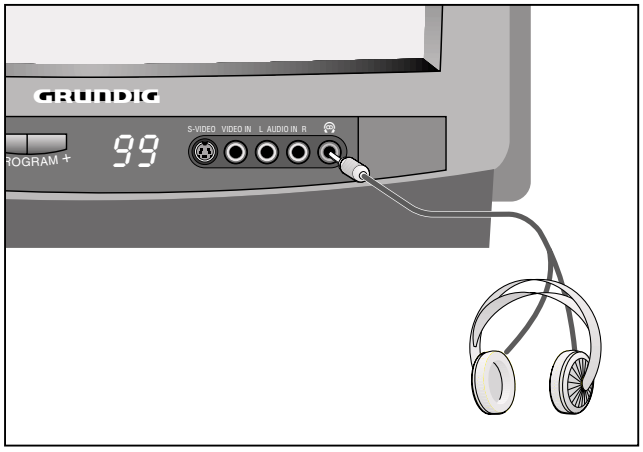
Remote Control of a video recorder

You can also use the remote control of this television to operate a Grundig video recorder. Your specialized dealer can advise you as to which are suitable.

Keep the ❍ VIDEO button pressed.
This switches the remote control to video recorder operation.
Now press the desired button.
Refer to the following list for the functions of the individual buttons.

◀◀	(Numbered button 1)	= Reverse picture search
▶▶	(Numbered button 2)	= Forward picture search
●	(– ◉ button)	= Record start
■	(◉ + button)	= Stop
◀◀	(Numbered button 7)	= Fast rewind
▶▶	(Numbered button 8)	= Fast forward wind
❚❚	(– ☼ button)	= Pause
▶	(☼ + button)	= Start playback
▼	(Numbered button 4)	= Channel position –
▲	(Numbered button 5)	= Channel position

… for Stereo Headphones



Connection

Insert the headphone jack (3.5 mm ∅ jack) into the socket.

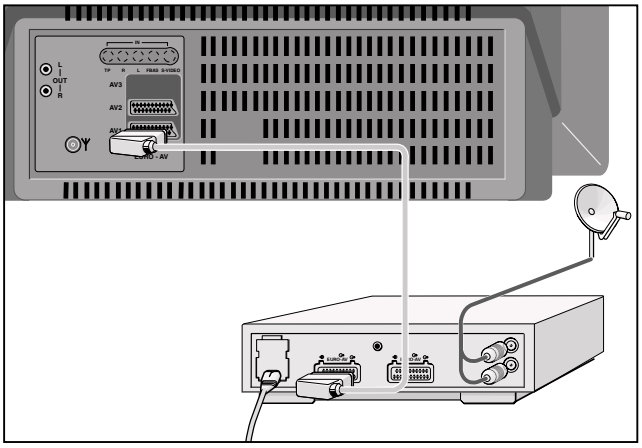
Operation

Press the (AUX) button, then adjust the volume with the ◀ or ▶ button.

The adjusted volume is displayed on a scale.

For two-channel selection while using the headphones, refer to the Audio Menu.

For Satellite Receiver



Connection

Connect your satellite receiver to the black EURO-AV socket or the orange AV socket with a suitable cable.

Operation

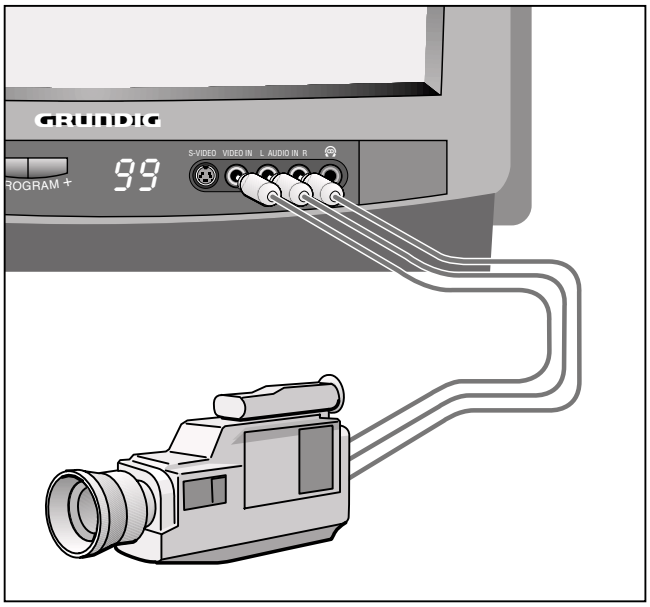
When connected to the black EURO-AV socket, press the ⓪AV button until A 1 appears.

When connected to the orange EURO-AV socket, press the ⓪AV button until A 2 appears.

While keeping the ❍ SAT button pressed, enter the desired channel position of the satellite receiver with the numbered buttons ⓪…⑨.

Connection Capabilities and Operation …

… for Camcorder (VHS, Video 8)



Connection

Picture signal

Connect the corresponding picture socket on the camcorder to the VIDEO IN socket with a suitable connection cable.

Camcorder with mono playback

Connect the socket L with the camcorder´s audio socket.

Repeatedly press the ⓪AV button until A 3 appears.

Press the AUX button and then the ◯▷ button.
"Mono A" appears on the screen.

Camcorder with stereo playback

Connect the sockets L and R with the camcorder´s audio sockets.

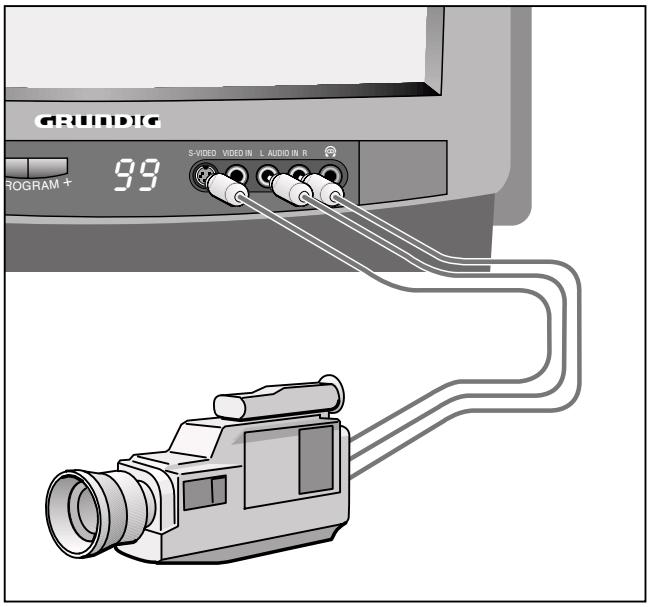
Repeatedly press the ⓪AV button until A 3 appears.

The S-VIDEO socket must be free.

Operation

Start camcorder playback.
The camcorder playback is seen on the screen.

… for S-VHS Video Recorder, S-VHS Camcorder or Hi8 Camcorder



Connection

Picture signal

Connect the corresponding picture socket on the camcorder to the S-VIDEO socket with a suitable connection cable.

Camcorder with mono playback

Connect the socket L with the camcorder´s audio socket.

Repeatedly press the ⓪AV button until A3 appears.

Press the AUX button and then the ◯▷ button.
"Mono" appears on the screen.

Camcorder with stereo playback

Connect the sockets L and R with the camcorder´s audio sockets.

Press the ⓪AV button until A3 appears.

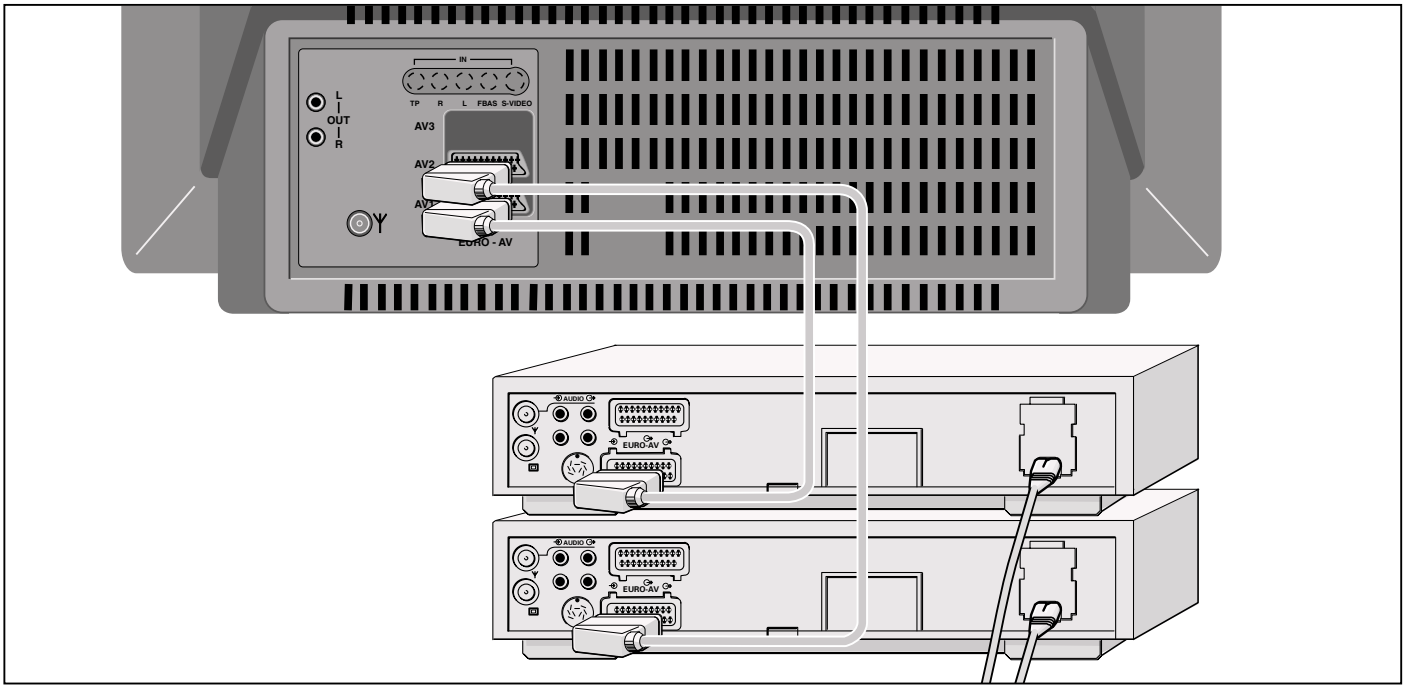
The FBAS socket must be free.

Operation

Start camcorder playback.
The camcorder playback is seen on the screen.

Connection Capabilities and Operation ...

Copying Recordings via the Television



from socket → to socket

AV1 (black)	→	AV2 (orange)
AV2 (orange)	→	AV1 (black)
AV3 (FBAS)	→	AV1 (black) AV2 (orange)

Connection example

Connect the playback recorder to the black Euro-AV socket or a camcorder to the VIDEO IN cinch socket, L AUDIO IN R. Connect the recording recorder to the orange AV socket.

Operation

Select the input socket with the ⓪AV button.

AV1 = Euro-AV socket (black); display A 1
AV2 = orange socket; display A 2
AV3 = VIDEO IN socket; display A 3

For AV3, the sound must be separately connected via the two phono (Cinch) sockets.

Press the AUX button and then the ⓪AV button.

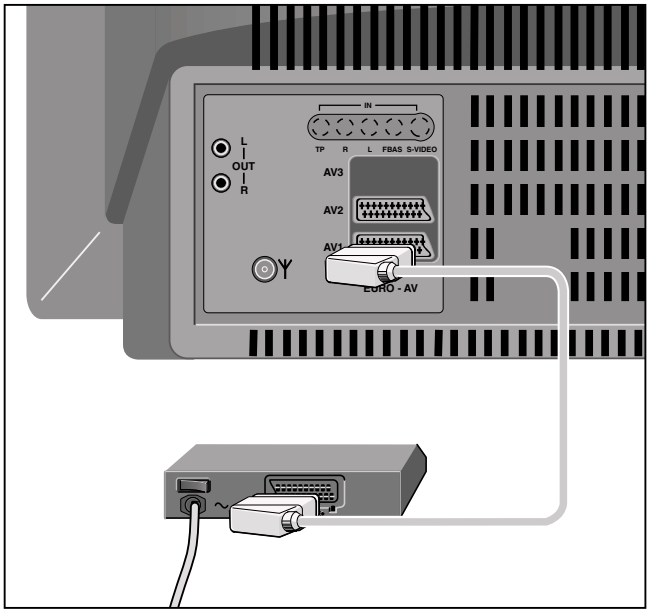
"Copy" appears on the screen. You are now free to watch any channel on your television without disturbing the recording (not possible when copying from AV2 to AV1).

To cancel the "Copy" function:
Press the ⓪AV button to select the AV position which was the playback (copy) source.

Press the AUX and then the ⓪AV button.

Connection Capabilities and Operation …

… for Decoder (Descrambler)



Certain television stations scramble their programmes, meaning that the sound and picture signals your television receives are purposely distorted. You can unscramble such transmissions with a decoder.

Connection

Connect your decoder to the black EURO-AV socket and switch it on.

Operation

If the "Premiere" channel was stored when assigning channels with the "ATS euro plus" function, the necessary settings for this channel position are automatically adjusted.

On your television, select the scrambled channel position.

Press the AUX and then the 0 AV button.
The current setting appears.
By repeatedly pressing the 0 AV button you can select the following functions:

"Descrambler off" (switching voltage is not evaluated).

"Descrambler on Auto"
Automatic switching to mono, stereo, two-channel broadcasts. This depends on the broadcast received via the aerial.

"Descrambler on Stereo"
The left and right sound channels are switched through to the speakers.

"Descrambler on Mono-L"
With mono-L, the left sound channel is switched to both speakers.

"Descrambler on Mono-R"
With mono-R, the right sound channel is switched to both speakers.

The scrambled programmes are routed from the television to the decoder, are descrambled, and then are routed back to the television, where the unscrambled signals can be viewed as a normal television programme.

The orange AV socket is used for recording with a video recorder. If a channel position is to be set up for which decoder operation may be unsuitable, press the AUX and then repeatedly the 0 AV button until "Descrambler off" appears.

Connecting several additional units at the same time

If you want to connect several additional units at the same time, e.g. decoder, satellite receiver, video recorder, the connections should be made as follows:
– When receiving via a cable TV system:
Decoder → video recorder → TV receiver
(black EURO-AV socket).
– On satellite TV reception:
Decoder → satellite receiver → TV receiver
(black EURO-AV socket).
In this case, connect the video recorder to the orange AV socket.

Specification

Mains voltage

220-240 V, 50/60 Hz
(Power supply control range 190 … 264 V)

Power consumption

approx. 105 W
In standby approx. 5 W

Channel coverage

C01 … C99
Special channels S01 … S41

Sound output

2 x 15 W music power (2 x 7.5 W sine power)

Service note for the dealer

This unit is provided with a pluggable power supply cable. For replacements, contact the nearest customer service centre and always indicate the following order number: 8290-991-307.

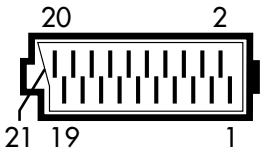
This unit conforms to VDE safety regulations and directives of the Deutsche Bundespost (German Federal Post Office; see certification mark on the type sticker on the rear of the unit), as well as all relevant ordinances governing X-ray emissions. The picture tube, which emits X-rays, is sufficiently shielded and therefore represents no danger. Accelerating voltage is max. 31 kV with a mean beam current of 1.5 mA.

Unauthorized tampering with the unit, in particular making adjustments to the high voltage system, or installing a different picture tube, can considerably increase X-ray emissions. Units so altered no longer conform to applicable safety regulations and may not be operated.

Pin assignment of EURO-AV socket

If you want to connect other devices to your television (for example, a computer or amplifier), your dealer can provide you with a normed standard connection by means of the following table:

Pin		Signal
1	=	Audio output right
2	=	Audio input right
3	=	Audio output left
4	=	Audio, earth
5	=	Blue, earth
6	=	Audio input left
7	=	RGB blue input
8	=	Switching voltage
9	=	Green, earth
10	=	–
11	=	RGB green input
12	=	–
13	=	Red, earth
14	=	Earth
15	=	RGB red input
16	=	RGB switching voltage
17	=	Video, earth
18	=	RGB switching voltage, earth
19	=	Video output
20	=	Video input
21		Shielding/earth



Subject to alterations.
E. and O.E.

GRUNDIG AG • D-90762 FÜRTH

Printed in Austria

21331-941.01

0 1 2 3 4 5 6 7 8 9